

REMARKS

Claims 1, 3-11, 15-27 and 31-44 are presented for consideration, with Claims 1, 18, 34-37 and 41 being independent.

The independent claims have been amended to further distinguish Applicant's invention from the cited art.

The amendments to the claims were not presented earlier as it was believed that the previously presented claims would be found allowable. This Amendment does not add any additional claims. Moreover, the Examiner's familiarity with the subject matter of the present application will allow an appreciation of the significance of the amendments herein without undue expenditure of time and effort. Finally, the Amendment does not raise new issues requiring further consideration or search. Accordingly, it is believed that entry of the Amendment is appropriate.

Claims 1, 3-11, 15-27 and 31-34 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Isono '377. This rejection is respectfully traversed.

Applicant's invention as set forth in Claim 1 relates to an image display system capable of performing stereoscopic display. The system includes stereoscopic image display means for displaying a stereoscopic image having stripe parallax images arranged for right and left eyes on first display means, window setting means for setting a window on a desired position of the first display means in which a stereoscopic image is displayed, and stereoscopic vision control means for displaying a parallax barrier pattern on second display means such that stripe images of the stereoscopic image displayed on the first display means are respectively observed with the right and left eyes. In addition, changing means changes the display state of the window so as to realize the proper positional relationship between the stereoscopic image and the parallax

barrier pattern when the relative positional relationship between the stereoscopic image displayed in the window and the parallax barrier pattern displayed on the second display means is not a proper positional relationship with which an observer can obtain a proper stereoscopic vision.

In accordance with Applicant's claimed invention, the display state of the window is changed, if necessary, to maintain the proper positional relationship.

As discussed in the previous Amendment of July 26, 2001, the patent to Isono relates to a three-dimensional display apparatus that includes an image barrier 46 having stereoscopic vision control means, i.e., a barrier display panel, 28. As shown in Figure 7A, Isono discloses changing a window in which a parallax barrier is displayed. As understood, in Isono if a window displayed on a first display is moved, then the window in which the parallax barrier is displayed, i.e., the second display, is also moved in order to maintain a proper stereoscopic vision. In contrast to Applicant's claimed invention, however, Isono does not teach or suggest, inter alia, changing the display state of the window on the first display to realize the proper positional relationship between the stereoscopic image and the parallax barrier pattern when a relative positional relationship is not proper.

The other independent claims, i.e., Claims 18, 34-37 and 41, can also be distinguished over Isono.

In Claim 18, for example, an information processing apparatus can be connected to an image display apparatus having first display means, second display means and stereoscopic vision control means, with the stereoscopic vision control means displaying a parallax barrier pattern on the second display means to allow an observer to observe stripe images of a stereoscopic image with right and left eyes displayed on the first display means. In Claim 18, adjustment means adjusts the relative positional relationship between the stereoscopic

image displayed in a window on the first display means and the parallax barrier pattern displayed on the second display means to allow a proper stereoscopic vision by changing the display state of the window when it is determined that the positional relationship is not proper.

Claim 34 relates to a method of controlling an information display system having stereoscopic image display means for displaying a stereoscopic image obtained by arranging stripe parallax images corresponding to the left and right eyes of an observer on a first display and stereoscopic vision control means for displaying a parallax barrier pattern on a second display to allow the observer to observe stripe images of the stereoscopic image with right and left eyes. The method includes the steps of setting a window on a desired position of the first display of a stereoscopic image display, in which a stereoscopic image is displayed, detecting a relative positional relationship between the stereoscopic image displayed in the window and the parallax barrier pattern displayed by the stereoscopic vision control means. When the relative positional relationship detected is not proper, the display state of the window is changed to allow the proper positional relationship between the stereoscopic image and the parallax barrier pattern.

In Claim 35 a method is provided for controlling an information processing apparatus which can be connected to an image display apparatus having a first display, a second display and stereoscopic vision control means that displays a parallax barrier pattern on the second display to allow an observer to observe stripe images of a stereoscopic image with right and left eyes, displayed on the first display. The method includes the steps of generating image data including a window to be located on a desired position of the first display of the display apparatus, in which parallax image corresponding to the right and left eyes are arranged to display a stereoscopic image, and determining whether a relative positional relationship between

the generated stereoscopic image displayed in the window and the parallax barrier displayed by the stereoscopic vision control means is a proper positional relationship. When it is determined that the positional relationship is not proper, the relative positional relationship is adjusted by changing the display state of the window to allow a proper stereoscopic vision.

Claim 36 is directed to a storage medium storing a computer program for performing an image display and corresponds generally to Claim 35.

Claim 37 relates to an image display system capable of performing stereoscopic display, and comprises a stereoscopic image display means for displaying a stereoscopic image having stripe parallax images arranged for right and left eyes on a first display means, stereoscopic vision control means for displaying a parallax barrier pattern on a second display means such that stripe images of the stereoscopic image displayed on the first display means are respectively observed with the right and left eyes, instruction means for instructing to display a new stereoscopic image on a desired position of the first display means, and display control means for displaying the new stereoscopic image on the first display means so that an observer can obtain a proper stereoscopic vision of the new stereoscopic image. The display control means includes determination means for determining whether a relative positional relationship between the stereoscopic image displayed in a window generated by generating means and the parallax barrier pattern displayed is a proper positional relationship which allows a proper stereoscopic vision, and adjusting means for adjusting the relative positional relationship to allow a proper stereoscopic vision by changing the display state of the window when it is determined that the positional relationship is not proper.

Finally, Claim 41 relates to a method of controlling an image display system having stereoscopic image display means for displaying a stereoscopic image having stripe

parallax images arranged for right and left eyes on a first display and stereoscopic vision control means for displaying a parallax barrier pattern on a second display such that stripe images of a stereoscopic image displayed on the first display are respectively observed with the right and left eyes. The method includes the steps of instructing to display a new stereoscopic image on a desired position of the first display, and displaying the new stereoscopic image on the first display so that an observer can obtain a proper stereoscopic vision of the new stereoscopic image. The display step includes a determination of whether a relative positional relationship between the stereoscopic image displayed in the window generated by the generating means and the parallax barrier pattern displayed by the stereoscopic vision control means is a proper positional relationship which allows a proper stereoscopic image, and adjusting the relative positional relationship to allow a proper stereoscopic vision by changing the display state of the window when it is determined that the positional relationship is not proper.


Accordingly, reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. §102 is respectfully requested.

It is submitted, therefore, that Applicant's invention as set forth in independent Claims 1, 18, 34-37 and 41 is patentable over the cited art. In addition, dependent Claims 3-11, 15-17, 19-27, 31-33, 38-40 and 42-44 set forth additional features of Applicant's invention. Independent consideration of the dependent claims is respectfully requested.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Four Times Amended) An image display system capable of performing stereoscopic display, comprising:
 - stereoscopic image display means for displaying a stereoscopic image having stripe parallax images arranged for right and left eyes on [a] first display [screen] means;
 - window setting means for setting a window on a desired position of [the] said first display means [screen of said stereoscopic display means], in which a stereoscopic image is displayed;
 - stereoscopic vision control means for [controlling directivity of the stereoscopic image displayed on said stereoscopic image display means] displaying a parallax barrier pattern on second display means such that stripe images of the stereoscopic image displayed on said first display means are respectively observed with the right and left eyes; and
 - changing means for, when a relative positional relationship between the stereoscopic image displayed in said window set by said setting means and said parallax barrier pattern displayed on said second display means by said stereoscopic vision control means is not a proper positional relationship with which an observer can obtain a proper stereoscopic vision, changing the display state of said window so as to realize the proper positional relationship between said stereoscopic image and the parallax barrier pattern [said stereoscopic vision control means].

4. (Amended) The system according to claim 3, wherein an amount of shift of the window is equal to a minimum pixel pitch of said [stereoscopic image] first display means.

5. (Amended) The system according to claim 3, wherein the stripe image displayed on said first display means is comprised of a horizontal stripe image [in the screen], and a direction in which the window is shifted is a vertical direction [in the screen].

6. (Amended) The system according to claim 3, wherein the [striped] stripe image displayed on said first display means is comprised of vertical stripe images [in the screen], and a direction in which the window is shifted is a horizontal direction [in the screen].

8. (Amended) The system according to claim 7, wherein an amount of shift of the stereoscopic image in the window is equal to a minimum pixel pitch of said [stereoscopic image] first display means.

9. (Amended) The system according to claim 7, wherein the stripe image displayed on said first display means is constituted by a horizontal stripe image [in the screen], and a direction in which the stereoscopic image in the window is shifted is a vertical direction [in the screen].

10. (Amended) The system according to claim 7, wherein the [striped] stripe image displayed on said first display means is constituted by vertical stripe images [in the screen], and a direction in which the stereoscopic image in the window is shifted is a horizontal direction [in the screen].

18. (Four Times Amended) An information processing apparatus which can be connected to an image display apparatus having first display means, second display means and stereoscopic vision control means [for controlling directivity of a stereoscopic image], said stereoscopic vision control means displays a parallax barrier pattern on said second display means to allow an observer to observe stripe images of [the] a stereoscopic image with right and left eyes, displayed on said first display means respectively, said information processing apparatus comprising:

generation means for generating image data including a window to be located on a desired position of [a display screen of said image display apparatus] said first display means, in which stripe parallax images corresponding to the right and left eyes are arranged so as to display a stereoscopic image;

determination means for determining whether a relative positional relationship between the stereoscopic image displayed in the window generated by said [generating] generation means and the parallax barrier pattern displayed on said second display means by said stereoscopic vision control means of said image display apparatus is a proper positional relationship which allows a proper stereoscopic vision; and

adjustment means for, [when said window is displayed on the screen and] when said determination means determines that the positional relationship is not proper , adjusting the relative positional relationship to allow a proper stereoscopic vision by changing the display state of said window.

20. (Amended) The apparatus according to claim 19, wherein an amount of shift of the window is equal to a minimum pixel pitch of said first display means of said image display apparatus connected to said information processing apparatus.

21. (Amended) The apparatus according to claim 19, wherein the stripe image displayed on said first display means is comprised of a horizontal stripe image [in the screen], and a direction in which the window is shifted is a vertical direction [in the screen].

22. (Amended) The apparatus according to claim 19, wherein the [striped] stripe image displayed on said first display means is comprised of vertical stripe images [in the screen], and a direction in which the window is shifted is a horizontal direction [in the screen].

24. (Amended) The apparatus according to claim 23, wherein an amount of shift of the stereoscopic image in the window is equal to a minimum pixel pitch of said first display means of said image display apparatus.

25. (Amended) The apparatus according to claim 23, wherein the stripe image displayed on said first display means is comprised of a horizontal stripe image [in the screen], and a direction in which the stereoscopic image in the window is shifted is a vertical direction [in the screen].

26. (Amended) The apparatus according to claim 23, wherein the [striped] stripe image displayed on said first display means is comprised of a vertical stripe image [images in the screen], and a direction in which the stereoscopic image in the window is shifted is a horizontal direction [in the screen].

34. (Four Times Amended) A method of controlling an information display system having stereoscopic image display means for displaying a stereoscopic image obtained by arranging stripe parallax images corresponding to the right and left eyes of an observer on a first display [screen] and stereoscopic vision control means for [controlling directivity of the stereoscopic image] displaying a parallax barrier pattern on a second display to allow the observer to observe stripe images of the stereoscopic image with right and left eyes, respectively, comprising the steps of:

setting a window on a desired position of the first display [screen] of a stereoscopic image display, in which a stereoscopic image is displayed;

detecting a relative positional relationship between the stereoscopic image displayed in the window and the parallax barrier pattern displayed by the stereoscopic vision control means; and

when the relative positional relationship detected is not a proper positional relationship which allows a proper stereoscopic vision, changing the display state of the window to allow the proper positional relationship between the stereoscopic image and the [stereoscopic vision control means] parallax barrier pattern.

35. (Four Times Amended) A method of controlling an information processing apparatus which can be connected to an image display apparatus having a first display, a second display and stereoscopic vision control means [for controlling directivity of a stereoscopic image obtained by arranging stripe parallax images corresponding to right and left eyes of an observer], the stereoscopic vision display means displays a parallax barrier pattern on the second display to allow [the] an observer to observe stripe images of [the] a stereoscopic image with right and left eyes, displayed on the first display respectively, said method comprising the steps of:

generating image data including a window to be located on a desired position of [a] the first display [screen] of the image display apparatus, in which stripe parallax images corresponding to the right and left eyes are arranged to display a stereoscopic image;

determining whether a relative positional relationship between the generated stereoscopic image displayed in the window and the parallax barrier pattern displayed

by the stereoscopic vision control means of the image display apparatus is a proper positional relationship which allows a proper stereoscopic vision; and

when [the window is displayed on the screen and] it is determined that the positional relationship is not proper, adjusting the relative positional relationship to allow a proper stereoscopic vision by changing the display state of the window.

36. (Four Times Amended) A storage medium storing a computer program for performing image display by using an image display apparatus having a first display, a second display and stereoscopic vision control means [for controlling directivity of a stereoscopic image obtained by arranging stripe parallax images corresponding to right and left eyes of an observer], the stereoscopic vision control means displays a parallax barrier pattern on said second display means to allow [the] an observer to observe stripe images of [the] a stereoscopic image with right and left eyes, displayed on the first display respectively, said computer program comprising:

a code for generating image data including a window to be located on a desired position of [a] the first display [screen] of the image display apparatus, in which stripe parallax images corresponding to the right and left eyes are arranged to display a stereoscopic image;

a code for determining whether a relative positional relationship between the generated stereoscopic image displayed in the window and the parallax barrier pattern displayed by the stereoscopic vision control means of the image display apparatus is a

proper positional relationship which allows a proper stereoscopic vision; and

a code for adjusting, when the window is displayed on the screen and it is determined that the positional relationship is not proper, the relative positional relationship to allow a proper stereoscopic vision by changing the display state of the window.

37. (Three Times Amended) An image display system capable of performing stereoscopic display, comprising:

stereoscopic image display means for displaying a stereoscopic image having stripe parallax images arranged for right and left eyes on a first display means;

stereoscopic vision control means for [controlling directivity of the stereoscopic image displayed on said stereoscopic image display means] displaying a parallax barrier pattern on a second display means such that stripe images of the stereoscopic image displayed on said first display means are respectively observed with the right and left eyes;

instruction means for instructing to display a new stereoscopic image on a desired position of said [stereoscopic image] first display means; and

display control means for displaying the new stereoscopic image on said [stereoscopic image] first display means so that an observer can obtain a proper stereoscopic vision of the new stereoscopic image, with said display control means comprising:

determination means for determining whether a relative positional relationship between the stereoscopic image displayed in a window generated by generating means and the parallax barrier pattern displayed by said stereoscopic vision control means is a

proper positional relationship which allows a proper stereoscopic vision; and

adjustment means for, when [said window is displayed on the screen and] it is determined that the positional relationship is not proper, adjusting the relative positional relationship to allow a proper stereoscopic vision by changing the display state of said window.

38. (Amended) The system according to claim 37, wherein said display control means displays the new stereoscopic image in a window opened [in] on said [stereoscopic] first display means.

41. (Three Times Amended) A method of controlling an image display system having stereoscopic image display means for displaying a stereoscopic image having stripe parallax images arranged for right and left eyes on a first display and stereoscopic vision control means for [controlling directivity of the stereoscopic image displayed on said stereoscopic image display means] displaying a parallax barrier pattern on a second display such that stripe images of [the] a stereoscopic image displayed on said first display are respectively observed with the right and left eyes, said method comprising the steps of:

instructing to display a new stereoscopic image on a desired position of the [stereoscopic image] first display [means]; and

displaying the new stereoscopic image on the [stereoscopic image] first display [means] so that an observer can obtain a proper stereoscopic vision of the new stereoscopic image, with the display step including the substeps of:

determining whether a relative positional relationship between the stereoscopic image displayed in a window generated by generating means and the parallax barrier pattern displayed by the stereoscopic vision control means is a proper positional relationship which allows a proper stereoscopic vision; and

adjusting, when [the window is displayed on the screen and] it is determined that the positional relationship is not proper, the relative positional relationship to allow a proper stereoscopic vision by changing the display state of the window.

42. (Amended) The method according to claim 41, wherein the display control step displays the new stereoscopic image in a window opened [in the stereoscopic] on said first display [means].